Remarks by John S. Groh, Chairman, Election Technology Council,
Information Technology Association of America
before the House Committees on Administration and Science

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Good afternoon, Chairmen Ehlers and Boehlert, Ranking Members Millender-McDonald and Gordon:

My name is John Groh and I am a Senior Vice President with Election Systems & Software. I am here to provide testimony on behalf of the Information Technology Association of America (ITAA) and its Election Technology Council (ETC). The ITAA is one of the nation's oldest and largest trade associations for the information technology industry, representing approximately 350 companies. The Election Technology Council consists of companies which offer voting system technology hardware products, software and services to support the electoral process. These companies have organized within the association to work together to address common issues facing our industry. Current members of the ETC are: Advanced Voting Solutions, Danaher Guardian Voting Systems, Diebold Election Systems, Election Systems & Software, Hart InterCivic, Perfect Voting System, Sequoia Voting Systems, and UniLect Corporation. Membership in the ETC is open to any company in the election systems marketplace.

The ETC is pleased to respond to your request for vendor perspective on issues surrounding the implementation of the 2005 Voluntary Voting Systems Guidelines (2005 VVSG) and the national voting system certification and testing processes.

Our member companies have a great stake in the conduct and outcome of this process. Indeed, voting solutions provided and supported by our members account for over 90% of voting systems in the marketplace today. Our members employ over 2,000 dedicated citizen employees, who all work hard to support the success of American elections.

First, I would like to acknowledge the very strong partnership the vendor community has with two important organizational leaders in this effort: the U.S. Election Assistance Commission (EAC) and the National Institute of Standards and Technology (NIST)/Technical Guidelines Development Committee (TGDC). Both should be commended for the focus and urgency with which they have moved to implement the requirements of the Help America Vote Act of 2002 (HAVA), the rollout of the Voluntary Voting Systems Guidelines, and the transition to a new voting system certification process.

Comments on the 2005 Voluntary Voting Systems Guidelines Process:

There are several realities that voting system vendors believe must be acknowledged and accounted for in laying the groundwork for a successful rollout of the 2005 VVSG. The delays at the beginning of the EAC-NIST ramp-up period set the guidelines development process back by about 12 – 18 months. The effort to issue the VVSG was unparalleled in terms of the scope and speed of a technical guidelines development for voting systems, and possibly for any comparable technology. Indeed, similar efforts have taken many years to complete. However, the initial delays compounded an already uncertain situation and many state and local governments chose to delay purchases of HAVA-compliant voting equipment in anticipation of the new guidelines.

Given the amount of installation work now being undertaken, and despite the complexity and politics involved with voting systems procurements, the implementation of new voting systems that meet the requirements of HAVA is generally going smoothly. With primaries and general elections now looming, elections officials must exercise caution against taking shortcuts in important areas such as training, testing, and preparation.

Many, if not most, of the problems that are experienced in the U.S. electoral process today are not directly technological, but involve humans and their interactions with technology. Reports of problems in the 2006 primary elections have been largely attributable to insufficient training and preparedness in the polling place. Those closely involved in voting know that it is an exercise with a thousand moving parts and most of those parts are processes conducted by human hands.

The voting systems installation situation currently facing states and local governments is unique. Once this work is complete, the hardware may be in place ten years or more. While the immediate burdens of procurement and installation will surely diminish, the ongoing management and support of the large quantity of new systems, combined with the upcoming VVSG effective dates and rollout of a new certification process, presents many new challenges and issues to elections officials and their vendor partners. Issues our members wish to raise to your attention include:

- What is feasible both fiscally and operationally?

- The impact of certification and testing on the guidelines
- The need for continued funding streams
- The need for phased implementation

What is Feasible Both Fiscally and Operationally?

There is a discernible trend in the development of the 2005 VVSG to "push the envelope" of voting system capabilities. While vendors can develop and deliver most of what is required in the VVSG, such requirements will come at a cost. Eventually, addition of system features and functions will be constrained by what the market will be willing and able to pay. A balance needs to be struck between the development of new requirements in future versions of the VVSG and fiscal and operational realities in the states.

Those overseeing development of new voting systems guidelines should follow the old adage: "perfect should not be the enemy of good." While we always strive towards perfection, we believe that making perfection the operating standard will have unintended consequences. What may be perfect for an aspect of security may be a limiting factor on usability. There may need to be compromises to find a "good" and balanced system that can actually be produced, certified and made affordable to jurisdictions using taxpayers' monies.

The Impact of Certification and Testing on the Guidelines

As new voting systems certification and testing processes are rolled out, there will be a learning curve that will cause delays in the implementation of the guidelines. Once the guidelines are actually applied by a test lab against a voting system, it is likely that the complexity of the guidelines and conflicts between some requirements in the 2005 VVSG will be discovered. As instances are discovered, further interpretation and revision of the guidelines will become necessary. Some examples that we know of to date are:

- The subjective interpretation that will be required in the area of testing systems for accommodating cognitive disabilities (no one system can accommodate all disabilities and there is no list of disabilities defined for the labs to use in their testing.)
- The addition of a standard port to read the DRE memory without compromising security using an independent system that hasn't been established.
- Requirements that need to be tested, yet no tests are yet defined (e.g., usability, benchmarks are still being studied by NIST.)

Voting systems features and functions addressed for the first time in the 2005 VVSG have mandated the development of new tests. Some of the 2005 VVSG requirements have no tests defined to date. It is likely that the development and initial implementation of new tests will run into unforeseen difficulties and delays to determine objective and effective parameters. Some tests may add prohibitive delays or costs to the certification process. Depending on the nature of the problem, this may require modification to the guidelines or to the testing process itself.

These situations will demand some flexibility in revisions to the guidelines and certification processes. The alternative will be to find some voting systems, or even a generation of voting equipment, un-certifiable against a possibly unattainable or untestable standard. If that equipment can readily meet the requirements spelled out in HAVA, such a result would be a poor outcome and one that may force states to squander federal and state monies already appropriated, disbursed and spent on HAVA compliant equipment.

Need for Continued Funding Streams

One shortcoming of the Help America Vote Act of 2002 is the lack of a mechanism for continued funding to the states and election jurisdictions. Under the 2005 VVSG and future iterations of the guidelines, it is almost certain that states and election jurisdictions will be required to purchase and deploy new voting systems hardware and – more likely – firmware and software to be compliant with the new guideline iterations. While much of the expense for new systems compliant with the 2002 Voluntary Voting System Standards (2002 VVSS) was covered by the first HAVA appropriations, much of the continuing expense for modifications and upgrades demanded by changes in the 2005 VVSG and future iterations will fall to the states and local governments.

In many states, the most significant expense not covered by federal money was for Voter Verified Paper Audit Trail (VVPAT) equipment. The purchase of VVPAT printers was not anticipated by HAVA, and not enough money appropriated for it. In many states, legislative mandate has made the VVPAT a necessary voting system component. The additional cost of these devices has diverted monies from other important aspects of HAVA, such as voter education and user training.

The increasing complexity required of voting systems by the guidelines is creating a need for more user training. As I stated above, the vast majority of problems experienced with voting systems are attributable to insufficient training and preparedness in the polling place. Some of these problems will decrease as elections officials and other system users move along the technology learning curve. But funding the necessary training will move elections jurisdictions more rapidly along the learning curve, expediting the drive to problem-free elections.

Need for Phased Implementation

The voting systems market will take some time to adopt fully the new guidelines and certification process. For evidence of the time it takes for the marketplace to completely adjust to and absorb a new standard from release to widespread adoption, one need look no further than the case of the 2002 VVSS. It took more than three years from the initial release to adoption on a near-national basis. This lengthy adoption period was not for a lack of trying on the part of states and vendors but rather recognition that the process to make encompassing changes requires the time to do it right. The funding that HAVA provided

facilitated the adoption of the 2002 VVSS by the states. As there currently are no federal funds earmarked to facilitate the implementation of 2005 VVSG compliant voting systems, the nation-wide adoption of the 2005 VVSG may take even longer.

Given that the 2005 VVSG adoption process may take at least 2 to 3 years to complete, our members have recommended a phased implementation of the guidelines be taken under consideration by the EAC[1]. This is a critically important issue which merits consideration by all interested parties.

Our members believe that equipment certified under the 2002 VVSS is HAVA-compliant. However, much of that equipment will not be compliant with the 2005 VVSG at the time the new guidelines become effective in December 2007. It is our position that voting systems certified to meet 2002 VVSS that are HAVA-compliant and have been proven in the field to provide the customer and the voter with a satisfactory level of usability, reliability, accuracy, and security should be grandfathered under the 2005 VVSG. Many of the issues raised regarding 2002 VVSS compliant equipment can likely be addressed through operational procedure changes and software modifications.

If equipment certified under the 2002 standard is not grandfathered under the 2005 guidelines, the cost burden to the customer will be onerous as jurisdictions will have to replace their existing 2002 VVSS and HAVA compliant equipment with 2005 VVSG compliant equipment. Without some type of grandfathering provisions under the 2005 VVSG, additional federal funds will be necessary to cover the cost of replacement equipment and upgrades. Jurisdictions should be able to get at least a ten to fifteen year return on investment from their existing equipment and not be forced to replace it every time a new version of the guidelines are implemented,

Comments on National Voting Systems Certification and Testing Processes:

The EAC provided the states and NIST a 24-month transition window after the adoption of the 2005 VVSG on December 14, 2005 to migrate to a new set of voting system guidelines and certification process. This migration has already begun and the EAC approved adoption of an interim set of federal certification procedures at its July 13, 2006 meeting. To facilitate federal ITA certifications before the December 2007 deadline, the new certification process will likely need to be in place before the end of this year, with accredited testing laboratories ready to test, and tests defined for every applicable requirement in the 2005 VVSG.

[1] ETC testimony before U.S. Election Assistance Commission, February 2, 2006 http://www.electiontech.org/downloads/ETC%20Groh%20EAC%20Testimony%20-%202.2.06%20-%20Final.pdf

There are several important issues that should be addressed in the migration to new certification and testing processes, including:

- Testing Frequency and Repetition
- Developing New Uniform, Economical Testing Practices
- Certification for Systems Developed under a Previous Standard

Testing Frequency and Repetition

As the EAC and NIST move forward in the design and implementation of a new certification process, our members believe the EAC should give serious consideration to the fundamental issue of testing frequency and repetition. State and county election officials, and their vendor partners, face an ever-increasing volume of federal qualification and state testing activity. Reducing the cost and delay imposed by continual – and often repetitive – testing should be a primary consideration of the new certification process. By combining the federal level ITA certification testing and basic state level tests, the system certification process could be made more streamlined and uniform, saving valuable time for election officials and reducing redundant non-value added costs for everyone.

Developing New Uniform, Economical Testing Practices

Not only is testing voting systems for the purpose of obtaining federal and state certifications becoming too frequent and overly costly, the situation may soon be aggravated by the need for new and fairly complex tests mandated by the 2005 VVSG. The guidelines put forth several new requirements for which no appropriate tests currently exist. According to experts in the standards and testing field, the most challenging tests may prove to be in the areas of system usability and security.

Further, the advent of state-mandated volume testing has dramatically increased costs of certification in some states. Volume testing incorporates the use of at least 100 DREs, each unit counting hundreds of ballots over the course of days to emulate the election-day experience at a polling site. While the goals of this type of testing are worthy, cost increases have resulted.

Without the development of new tests that are uniformly applied from testing lab to testing lab, and designed from the outset to diminish the need for repetitive tests, a potentially vast new area of vendor expense may be created. Testing expense has the potential to drive up voting system costs significantly and slow the entry of new systems into the market. The ETC believes that the EAC, NIST, and other concerned groups should quickly take steps to begin work on developing more uniform and economical testing for voting systems.

Certification for Systems Developed under a Previous Standard

In previous communications with the EAC, we have asked the Commission to recognize and retain the good and common elements of the pre-existing NASED voting system certification

procedures. We expect that the EAC certification process will likely incorporate several elements of the NASED procedure.

One element of the current NASED certification process that the EAC has indicated it will carry forward is the discontinuation of certifying voting system platforms that were certified under a previous standard. It is important that Members of Congress understand the economic and election performance impacts of such a step on state and county election administrators, the voters and vendors.

We know that stopping any and all certification of systems certified under the 2002 VVSS, on a certain date, without an allowance for state required enhancements or to fix errors found, will impose major economic consequences on states or election jurisdictions which have recently purchased voting systems under those standards. Due to the many meaningful changes made under the 2005 VVSG, there may be no way to economically retrofit some voting systems. Such equipment may have to be discarded and new procurements undertaken with new purchase costs to the election jurisdictions.

In addition to cost and other economic impacts, the EAC should consider election management and performance issues in setting transition policy for systems certified under the 2002 VVSS. States and jurisdictions make voting system acquisitions with an expectation of a 10 to 15 year service life. This timeframe allows the customer to refresh technology when it becomes near-obsolete or to take advantage of technology upgrades as they become available in the market. As states and jurisdictions introduce new technology, they must move along the learning curves for system usage, support, and training. Changes to hardware platforms can impact the training that the customer has invested in its pollworkers as well as associated voter education programs.

Concluding Remarks:

In providing this testimony, our intention is to give Members of the Committees vendor perspective on the rollout of new voting systems guidelines and certification processes to the vendor community and, as we see it, to the states and election jurisdictions – our valued customers whom we serve.

It is our belief that the adherence to standards and rigor of the certification process is critical to maintaining the integrity of our elections. State adoption of the federal Voluntary Voting System Guidelines is what makes the standard effective.

The Election Technology Council and its members are committed to working with the EAC, NIST, and our customers, to see the 2005 VVSG and a new certification process through to successful implementation. Further, we look to EAC and NIST as the bodies best positioned

and armed to tackle the tasks at hand. We hope that other parties interested in working on elections equipment and administration issues would similarly recognize the importance of the EAC and NIST initiatives and refrain from launching parallel and – in some instances – conflicting initiatives.

Above all, we are responsive to customer needs and are committed to providing safe, secure, accurate, reliable and accessible voting systems under any standard or certification program. We only ask that the appropriate time be allowed so it can be done right and that the funding and costs of implementation be considered when creating new guidelines and certification processes. We all recognize and accept that with new voting system technology comes complexity and need for changes in election administration, poll worker skills and increased voter education and outreach programs.

We are all involved in this process together, and by working together we can improve the process of voting, voter access and participation.